

Dynamic Vocabulary Instruction in the Secondary Class

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Archer, A., & Hughes, C. (2011). *Explicit Instruction: Effective and Efficient Teaching*. NY: Guilford Publications.

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Topics

- Importance of Vocabulary
- Components of a Vocabulary Program
- Quality Classroom Vocabulary
- Explicit Vocabulary Instruction
- Word Learning Strategies
- Assessment Formats

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Importance of Vocabulary Instruction

- Receptive Language
 - Reading Comprehension (Chall, Jacobs, & Baldwin, 1990; Scarborough, 1998, Stahl & Fairbanks, 1987)
 - Listening Comprehension
- Expressive Language
 - Writing
 - Speaking
- Overall Reading Achievement (Stanovich, et al., 1993)
- Overall School Success (Becker, 1977; Anderson & Nagy, 1991)
- Hallmark of an Educated Individual (Beck, McKeown, Kucan, 2002)

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Importance of Vocabulary Instruction

- Vocabulary Gap
 - Linguistically “poor” first graders knew 5,000 words; linguistically “rich” first graders knew 20,000 words. (Moats, 2001)
 - Children who enter school with limited vocabulary knowledge grow more discrepant over time from their peers who have rich vocabulary knowledge. (Baker, Simmons, & Kame'enui, 1997)
 - The number of words students learn varies greatly.
 - 2 versus 8 words per day
 - 750 versus 3000 words per year

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Importance of Vocabulary Instruction

- Vocabulary Gap
 - Gap in word knowledge persists though the elementary years. (White, Graves, & Slater, 1990)
 - The vocabulary gap between struggling readers and proficient readers grows each year. (Stanovich, 1986)
 - After the primary grades, the “achievement gap” between socioeconomic groups is a language gap. (Hirsh, 2002)
 - For English Language Learners, the “achievement gap” is primarily a vocabulary gap. (Carlo, et al., 2004)

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Components of a Vocabulary Program

- High-quality Classroom language (Dickinson, Cote, & Smith, 1993)
- Explicit Vocabulary Instruction (Baker, Kame'enui, & Simmons, 1998; Baumann, Kame'enui, & Ash, 2003; Beck & McKeown, 1991; Beck, McKeown, & Kucan, 2002; Biemiller, 2004; Marzano, 2004; Paribakht & Wesche, 1997)
- Word-Learning Strategies (Buikima & Graves, 1993; Edwards, Font, Baumann, & Boland, 2004; Graves, 2004; White, Sowell, & Yanagihara, 1989)
- Wide Independent Reading (Anderson & Nagy, 1992; Cunningham & Stanovich, 1998; Nagy, Anderson, & Herman, 1987; Sternberg, 1987)

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High Quality Classroom Language

- Use high quality vocabulary in the classroom.
- To ensure understanding,
 - Tell students the meaning of words when first used.
 - “Don’t **procrastinate** on your project. *Procrastinate means to put off doing something.*”
 - Pair in the meaning of the word by using parallel language.
 - “Let’s **analyze** this equation. *Let’s figure it out.*”
 - “What was the significance of this **incident**..this event?”
 - “We need to **differentiate**..tell the differences.. between external and internal character problems.”

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Explicit Vocabulary Instruction

- Sources of words for vocabulary instruction
 - WORDS from core reading programs
 - WORDS from reading intervention programs
 - WORDS from content area instruction
 - Language Arts
 - Math
 - Science
 - Social studies
 - Health
 - Consumer Science
 - Art, PE, music, etc.
 - School-wide vocabulary instruction

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Explicit Vocabulary Instruction

- “direct vocabulary instruction has an impressive track record of improving students’ background knowledge and comprehension of academic content” Marzano, 2001, p. 69
- .97 effect size for direct teaching of vocabulary related to content Stahl & Fairbanks, 1986

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Explicit Vocabulary Instruction

Attributes of Good Vocabulary Instruction

1. Promote **word learning strategies**
2. Select words that enhance academic success
 - **General Academic Vocabulary** - Generalize across domains (*evidence, observe, investigate, classify, compared to, alternatively, in contrast*)
 - **Domain-Specific Vocabulary** - Specific to a domain or field of study (*suffrage, prokaryote*)
3. Order or group words **semantically**

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Explicit Vocabulary Instruction

Attributes of Good Vocabulary Instruction

4. Teach words using **explicit instruction**
5. Provide **student-friendly explanations**
6. Teach **parts of words** at the “moment of opportunity” (*biology - bio = life; autoimmune - auto =self*)
7. Provide **multiple exposures** to terms and meanings

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Explicit Vocabulary Instruction

Attributes of Good Vocabulary Instruction

7. Expand instruction to “**word relatives**”
(*category, categories, categorization, categorizer*)
8. Have students maintain vocabulary **log**
9. Maintain a **word wall**
10. Provide judicious **review**

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Explicit Vocabulary Instruction

■ Selection of Words

- Limit number of words given in depth instruction to 4 to 5 words (Robb, 2003)
- Select words that are **unknown**
- Select words that are **critical** to passage understanding
- Select words that students are likely to use in the **future** (Stahl, 1986)
 - General academic vocabulary found used in many domains
 - Domain-specific vocabulary that provides background knowledge

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Explicit Vocabulary Instruction

- Select **difficult words** that need interpretation
 - Words not defined within the text
 - Words with abstract referent
 - Words with an unknown concept

(NOTE: Be aware of words that are used differently in your subject.
theory - hunch VS in science a well-established explanation)

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Explicit Instruction - Practice Activity

Select 5 words for robust explicit instruction.

Reading Level: Eighth Grade Series: Prentice Hall		Passage: Breaker's Bridge Words: *Selected for instruction in manual.
obstacle*	district	amplify
writhing*	gorge	imperial
piers*	miniature	emerged
executioner*	defeated	insult
immortals*	desperation	deposited
emperor	supervising	deadline

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Explicit Vocabulary Instruction

- **Dictionary Definition**
 - **compulsory** - (1) Employing compulsion; coercive. (2) Required by law or other rule.
- **Student-Friendly Explanation**
 - **Uses known words.**
 - **Is easy to understand.**
- When something is **compulsory**, it is required and you must do it.

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On-line Dictionaries with Student-friendly Explanations

Collins Cobuild Dictionary of American English
<http://www.collinslanguage.com/free-online-cobuild-ESL-dictionary>
dictionary.reverso.net/english/cobuild

Longman's
<http://www.ldoceonline.com>
(Longman's Dictionary of Contemporary English Online)

Heinle's
<http://www.nhd.heinle17e.com/home.aspx>
(Heinle's Newbury Dictionary for American English)

Merriam Webster's
<http://www.learnersdictionary.com>

(Pronunciation assistance: www.howjsay.com)

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Explicit Vocabulary Instruction

Step 1. Introduce the word.

- a) Write the word on the board or overhead.
- b) Read the word and have the students repeat the word.
- c) Have students tap out the syllables in the word.
- d) Have students read the word by parts as you loop under the word.
- e) Have students repeat the pronunciation of the word.
(If the word is difficult to pronounce or unfamiliar have the students repeat the word a number of times.)

Introduce the word with me.

*This word is **suffrage**. What word? suffrage*

Tap and say the parts of the word. suf fra ge

Read the word by parts. suf fra ge

What word? suffrage

***Suffrage** is a noun.*

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Before Reading - Vocabulary

Step 2. Introduce meaning of word.

Option # 1. Present a student-friendly explanation.

- a) Tell students the explanation. OR
- b) Have them read the explanation with you.

Present the definition with me.

*When someone has **suffrage**, they have the right to vote in an election.*

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Before Reading - Vocabulary

Step 2. Introduce meaning of word.

Option # 2. Have students locate the definition in the glossary or text and break the definition into the critical attributes.

Glossary: **Suffrage** - the right to vote

suffrage

- the right
- to vote

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Explicit Vocabulary Instruction

Step 2. Introduce meaning of word.

Option # 3. Introduce the word using the meaningful parts in the word.

autobiography
auto = self
bio = life
graph = letters, words, or pictures

prokaryote pro = before karyote = kernel/nucleus
eukaryote eu = true karyote = kernel/nucleus

telescope
tele = distant
scope = look at

NOTE: 88% of key science words have Spanish cognates; 1/2 are high frequency words in Spanish

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Vocabulary

- Recommended resource for science teachers

The Sourcebook for Teaching Science by
Norman Herr

Chapter 1, *Building a Scientific Vocabulary*
contains lists of roots, prefixes, suffixes by science
domain

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Explicit Vocabulary Instruction

**Step 3. Illustrate the word with
examples.**

- a. Concrete examples
 - objects
 - acting out
- a. Visual examples
- b. Verbal examples

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Explicit Vocabulary Instruction

Suffrage Examples

When the United States was founded only white men with property had suffrage.

At the time of the American Civil War, most white men had been granted suffrage.

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Explicit Vocabulary Instruction

Suffrage Examples

In 1920, women were granted suffrage. The passage of the Nineteenth Amendment granted women the right to vote in all United States elections.

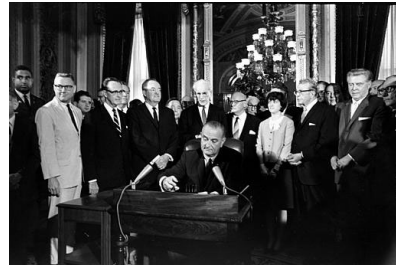


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Explicit Vocabulary Instruction

Suffrage Examples

The *Voting Rights Act of 1965* outlawed discriminatory voting practices that denied **suffrage** to many African Americans in the United States.



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Explicit Vocabulary Instruction

Step 4. **Check students' understanding.**

Option #1. **Ask deep processing questions.**

Check students' understanding with me.

Why is suffrage a critical aspect of a democracy?

Begin by saying or writing:

Suffrage is a critical aspect of democracy for the following reasons. First, _____

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Explicit Vocabulary Instruction

Step 4. Check students' understanding.

Option #2. Have students discern between examples and non-examples.

Check students' understanding with me.

Tell me **suffrage** or **not suffrage**.

The right to run for elected office. **not suffrage** Why not?

The right to vote. **suffrage** Why?

The right to develop ads for a candidate. **not suffrage** Why not?

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Explicit Vocabulary Instruction

Step 4. Check students' understanding.

Option #3. Have students generate their own examples.

Check students' understanding with me.

*Make a list of ways that **suffrage** could be limited or compromised.*

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Explicit Vocabulary Instruction

suffrage	noun
suffragist	noun



In 1917, all women in the United States did not have **suffrage**, the right to vote. **Suffragists** in New York City collected more than a million signatures of women demanding voting rights. They then paraded down Fifth Avenue with the signature placards.

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Vocabulary Instruction - Extensions

1. Introduce the **part of speech**.
2. Introduce **synonyms** (same), **antonyms** (opposite), **homographs** (same spelling - different meaning).
3. Tell students when and where the word is often **used**.
4. When appropriate, introduce the **etymology** (history and/or origin) of the word.
5. Introduce other words in the same **word family** (e.g., *manage, manager, management*).

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Vocabulary Instruction

Remember: *After a word has been taught, introduce students to the relatives.*

conform
conforms
conformed
conforming
conformity
conformist
non-conformist
non-conforming
non-conformity

advocate
advocates
advocating
advocacy

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Practice A - General Vocabulary

Step 1: Introduce the word.

*This word is **analyze**. What word?*

Analyze is a verb, an action of people.

Step 2: Introduce the meaning using a student friendly explanation.

*When you carefully think about something in detail so that you can explain it, you **analyze** it. If you carefully think about something in detail so you can explain it, you _____.*

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Practice A - General Vocabulary

Step 3. Illustrate with examples.

For example, when you carefully examine data from a science experiment, you _____.

When you carefully examine a graph in social studies, you _____.

When you carefully compare two meal plans for their nutritional value, you _____.

Step 4. Check understanding.

Tell your partner some things that you analyze in school.

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Practice A - General Vocabulary Extensions

■ Word Family - Relatives

Let's read some words related to analyze.

Say each word after me.

analyze
analyzing
analyzed
analysis
analyzable
analyzer

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Practice A - General Vocabulary Extensions

This words are in the same word family as analyze. When I touch the word, please say it.

When we examine the results of a science experiment, we _____(analyze) them.

Thus, _____(analyzing) experimental results is a major action in science class.

In the past, you _____(analyzed) data in science class.

You often had to write up your _____(analysis).

If the results were easy to explain, the results were _____(analyzable).

When you analyzed the results, you were the _____(analyzer).

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Practice A - General Vocabulary Extensions

■ Synonyms

*Working with your partner, generate a list of words that are synonyms for **analyze**. You may use your dictionary, thesaurus, or electronic reference sources.*

Students suggest:

examine	explore
think	study
contemplate	look over
inspect	check
investigate	monitor
scrutinize	assess

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Word-Learning Strategies

- Use of context clues.
- Use of meaning parts of the word.
 - Prefixes
 - Suffixes
 - Roots
 - Base words
- Use of dictionary, glossary, or other resource.

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Word-Learning Strategies-Use of context clues

- Teach students to use context clues to determine the meaning of unknown vocabulary. (Gipe & Arnold, 1979)
- However, if a student reads 100 unfamiliar words in print, he/she will only learn between 5 to 15 words.

(Nagy, Hermann, & Anderson, 1985; Swanborn & de Glopper, 1999)

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Word Learning Strategies- Use of context clues

■ Strategy #1 - Context Clues

1. Read the sentence in which the unknown word occurs for clues as to the word's meaning.
2. Read the surrounding sentences for clues as to the word's meaning.
3. Look at the parts of the word (prefixes, roots, suffixes) .
4. Ask yourself, "What might the word mean?"
5. Try the possible meaning in the sentence.
6. Ask yourself, "**Does it make sense?**"

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Word Learning Strategies - Use of glossary/dictionary

Strategy #2 - Glossary/Dictionary

1. Locate the unknown word in the glossary or the dictionary.
2. Read each definition and select the best one.
3. Try the possible meaning in the sentence.
4. Ask yourself, "**Does it make sense?**"

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Word Learning Strategies - Prefixes

- Elements attached to beginning of English words that alter meaning.
- Prefixes are useful because they are
 - used in many words,
 - consistently spelled,
 - easy to identify,
 - clear in meaning. (Graves, 2004)
- Teach very common prefixes. Un, re, in, and dis found in 58% of prefixed words.

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The Most Common Prefixes in English

Prefix	Meaning	% of prefixed words	Examples
un	not; opposite	26%	uncover, unlock, unsafe
re	again; back	14%	rewrite, reread, return
in/im/ir/il	not; into	11%	incorrect, insert, inexpensive, illegal, irregular, inability
dis	away, apart, negative	7%	discover, discontent, distrust
en/em	cause to	4%	enjoy, endure, enlighten, entail
mis	wrong; bad	3%	mistake, misread, misspell, misbehave
pre	before	3%	prevent, pretest, preplan
pro	in favor of	1%	protect, profess, provide, process
a	not; in, on, without	1%	atypical, anemia, anonymous, apolitical, apathy

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Word Learning Strategies -Suffixes

- Elements attached to ending of English words.
- Can change the part of the speech or the meaning.
- Focus on common derivational suffixes.
 - able, ful, less, ness, or
- Introduce the suffix and use to determine the meaning of a number of words (**ful** -helpful, truthful, mouthful, joyful).
- But not always! grateful

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Most Common Suffixes in English

Suffix	Meaning	%of prefixed words	Examples
s, es plural	more than one	31%	movies, wishes, hats, amendments
ed past tense	in the past	20%	walked, jumped, helped
ing present tense	In the present	14%	walking, jumping, helping
ly adverb	how something is	7%	quickly, fearfully, easily, happily, majestically, nonchalantly
er, or noun	one who, what/that/which	4%	teacher, tailor, conductor, boxer, baker, survivor, orator
ion, tion, sion noun	state, quality; act	4%	action, erosion, vision, invitation, conclusion, condemnation
able, ible adjective	able to be, can be done	2%	comfortable, likable, enjoyable, solvable, sensible, incredible
al, ial adjective	related to, like	1%	fatal, cordial, structural, territorial, categorical

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Word Learning Strategies Roots (Greek and Latin Roots)

- When teaching a word with a Greek or Latin root, use it as an **opportunity** to introduce the meaning of the root. Introduce the root within the target word and then expand to other words.

Example: hydroelectricity

"This word is hydroelectricity."

*"The first part of the word is **hydro**. Hydro is a root that means water.*

So in this chapter the word hydroelectricity refers to electricity produced by the movement of water."

*"Let's look at some other words that include **hydro**."*

dehydration	hydraulic
hydroplane	hydroelectric
hydrophone	hydrophobia

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Common Latin and Greek Roots

aqua	water	Greek	aquarium, aqueduct, aquaculture, aquamarine, aquaplane, aquatic
aud	hearing	Latin	audio, audition, audiovisual, auditorium, audiotape, inaudible
auto	self	Greek	autograph, autobiography, automobile, autocrat, autonomy
astro	star	Greek	astronomy, astrophysics, astrology, astronaut, astronomer, asterisk
biblio	book	Greek	Bible, bibliography, bibliophobia, bibliophile, biblioklept
bio	life	Greek	biography, biology, autobiography, bionic, biotic, antibiotic, biome, biosphere, biometrics
chrono	time	Greek	synchronize, chronology, chronic, chronicle, anachronism
corp	body	Latin	corpse, corporation, corps, incorporate, corporeal, corpulence
demo	the people	Greek	democracy, demography, epidemic, demotic, endemic, pandemic
dic, dict	speak, tell	Latin	dictate, dictation, diction, dictator, verdict, predict, contradict, benediction, jurisdiction, predict, indict, edict
dorm	sleep	Latin	dormant, dormitory, dormer, dormouse, dormition, dormitive
geo	earth	Greek	geology, geologist, geometry, geography, geographer, geopolitical, geothermal, geocentric

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Common Latin and Greek Roots

graph	to write, to draw	Greek	autograph, biography, photograph, telegraph, lithograph
hydro	water	Greek	hydroplane, dehydrate, hydroelectric, hydrogen, hydrophone
ject	throw	Latin	reject, deject, project, inject, injection, projection
logos, logy	study	Greek	geology, astrology, biology, numerology, zoology, technology, psychology, anthropology, mythology
luna	moon	Latin	lunar, lunacy, lunatic, interlunar
meter	measure	Greek	meter, thermometer, diameter, geometry, optometry, barometer, centimeter, symmetry, voltammeter
mega	great, large, big	Greek	megaphone, megalith, megalomania, megatons, megalopolis
min	small, little	Latin	minimal, minimize, minimum, mini, miniature, minuscule, minute, minority
mit, mis	send	Latin	mission, transmit, transmission, remit, missile, submission, permit, emit, emissary
path	feeling, suffering	Greek	pathetic, pathology, apathy, antipathy, sympathy, telepathy, empathy, sociopath
ped	foot	Latin	pedestrian, pedal, peddle, peddler, pedicure, pedometer
philia	love, friendship	Greek	philosopher, Philadelphia, philanthropist, philharmonic, Philip

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Common Latin and Greek Roots

phono	sound	Greek	phonograph, microphone, symphony, telephone, phonogram, megaphone, phony, euphony, xylophone, phony,
photo	light	Greek	photograph, photosynthesis, telephoto, photometer, photophilia
port	carry	Latin	port, transport, transportation, portable, portage, report
spect	see	Latin	respect, inspection, inspector, spectator, spectacles, prospect
scope	look at	Greek	microscope, telescope, periscope, kaleidoscope, episcopal
sol	sun	Latin	solar, solar system, solstice, solarium, parasol
struct	build, form	Latin	instruct, instruction, construction, reconstruction, destruct, destruction, infrastructure, construe, instrument, instrumental
tele	distant	Greek	telephone, television, telegraph, telephoto, telescope, telepathy, telethon, telegenic
terra	land	Latin	territory, terrestrial, terrace, terrarium, extraterrestrial, Mediterranean Sea, terra cotta, subterranean

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Word Learning Strategies - Word Families

- A group of words related in meaning. (Nagy & Anderson, 1984)
- If you know the meaning of one family member, you can infer the meaning of related words.

enthusiasm
enthusiastic
enthusiastically

collect
collecting
collection
collector

educate
educated
education
educator

imperial
Imperialism
imperialistic

predict
prediction
predictable
predictability
unpredictable
unpredictability

communicate
communicated
communicating
communication

evaluate
evaluating
evaluation

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Word Learning Strategies - Word Families

- **Word Family**
educate
educated
education
educator
- **Introduce the words in relationship to each other.**

"Teachers teach you how to read and write. They educate you. When you learn to read and write, you are educated. In school, you get an education. A teacher is an educator."

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Vocabulary Assessment - Formats

Examples/Non-examples

- **proclaim**
 - A woman refuses to talk to reporters about the election.
 - A woman tells reporters which candidate won the election.
- **grudgingly**
 - A child makes her bed only after five reminders.
 - A child immediately makes her bed in the morning, carefully lining up the pillows.

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Vocabulary Assessment - Formats

- **Sentence Rewriting**
- Mr. Jones commended Charles for his diligent work.

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Vocabulary Assessment - Formats

- **Context Analysis**
- After the prize winners were announced, Stacy ran to console Meg.
- How do you think Meg had done on the contest?
- When father heard Lisa had ripped up the letter from Steve, father commended her for it.
- What do you think father thought of Steve?

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